5 POINTS GATEWAY AREA ENHANCEMENT STUDY

FINAL REPORT

I. Introduction/Study Background

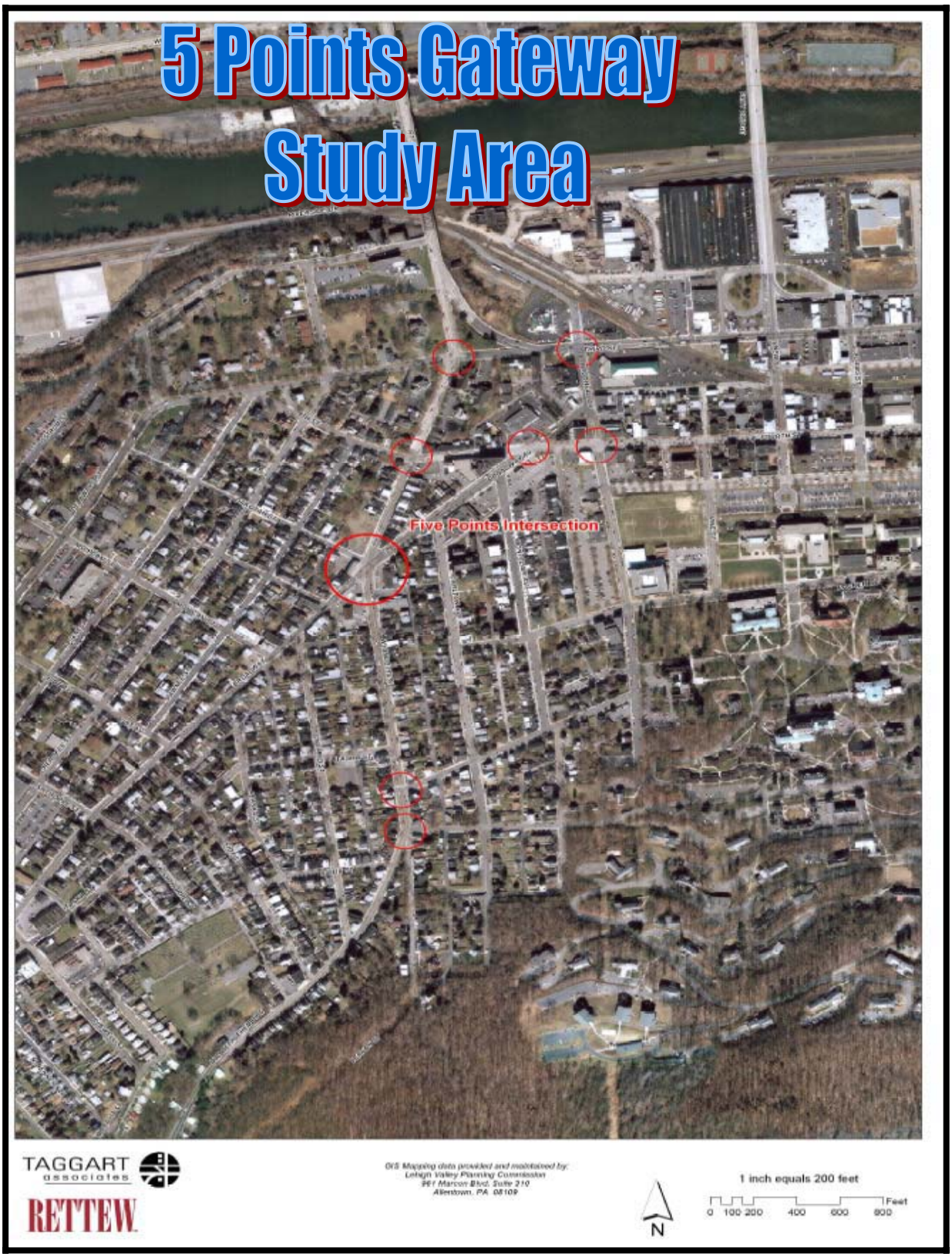
The 5 Points Gateway Area (5 Points) was identified in the Southside Vision 2012: Southside Bethlehem Residential Master Plan 2002-2012 as a regional gateway into the City of Bethlehem and its Southside. The plan explained that gateways are an important way to inform residents and visitors that they have entered a special area. The report cited parking, pedestrian safety, and vehicular circulation problems that have contributed to the demise of a successful mixed use neighborhood into a blighted area. In addition, development and increasing traffic volumes have compounded existing conditions and impacted local businesses. The Master Plan identified the 5 Points as one of four critical projects that require thoughtful improvements and recommends the area receive careful consideration to create a compatible mix of commercial and retail uses that meet the needs of the neighborhood.

The 5 Points has traditionally been on of the most congested areas in the City during peak hours of the day. The road is asked to serve many functions due to its geographic location and these functions are not always compatible. The 5 Points is a major river crossing, serves as an important link in the regional transportation system of the Lehigh Valley and helps move local traffic. In addition, the area is a neighborhood and commercial district for local residents as well as a gateway in to the City for Bethlehem's many visitors. Conditions in the 5 Points are only expected to become more complex as anticipated growth occurs from the redevelopment of 1,800 acre Brownfield once occupied by Bethlehem Steel, the revitalization of Bethlehem's Southside and development in surrounding municipalities.

The City commissioned this study to examine the interrelationships of the parking, pedestrian safety, and traffic conditions within the 5 Points and develop a cohesive strategy to address the deficiencies identified by the study consistent with the Master Plan. Since this area has been studied numerous times, an emphasis was placed on thinking "outside the box" for solutions that balance the complex issues of the area and reflect community values. While the primary focus of the study is the immediate vicinity of the 5 Points intersection and the Wyandotte St./Route 378 Corridor, the Study Area (see Figure 1) includes a system of seven (7) signalized intersections that are interdependent upon each other.

A cohesive strategy was developed that includes an immediate action plan that can implement small changes very quickly, a mid-term action plan, and a vision that provides a policy direction to evaluate long-term opportunities.

Figure 1: Study Area



II. Data Collection/Analysis

The following section of this report is a summary of the data collected and its analysis. More detailed information is in the technical file unless otherwise noted.

A. Background Studies

Prior traffic, parking, and planning studies pertinent to the 5 Points Gateway Area were reviewed, including:

- Route 412 Improvement Project
- South Side Bethlehem Master Plan
- Southside Vision 2012: Southside Bethlehem Residential Master Plan 2002-2012
- Bethlehem VISION Comprehensive Plan
- McDonald's Traffic Impact Study
- Traffic Impact Study for the Rezoning of the Five Points Intersection
- BethWorks Parking Inventory
- BethWorks Traffic Study

B. Traffic Data

A.M. and P.M. peak-hour traffic counts (7A.M.-9A.M. 4P.M.-6P.M.) were taken for the following study area intersections:

- Third Street and Wyandotte Street
- Third Street and Brodhead Avenue
- Fourth Street and Wyandotte Street
- Fourth Street and Broadway Avenue
- Fourth Street and Brodhead Avenue
- Broadway Avenue and Wyandotte Street
- Third Street Ramp and Wyandotte

A.M. peak-hour counts were taken at the following study area intersections:

- Summit Street and Wyandotte Street
- Summit Street and Brodhead Avenue
- Fourth Street and Delaware Avenue
- Dakotah Street and Delaware Avenue

Peak hour Level of Service (LOS) was determined for each intersection based on existing and projected future traffic conditions. This provides the benchmark to compare the impact of alternatives. LOS is based upon the amount of time delay a vehicle experiences when traveling through an intersection. LOS ranges from LOS A (minimal or no delay) to LOS F (delay greater than 80 seconds). In urban areas, LOS C is considered the acceptable standard. Figure 2 shows the study area's street network and Table 1 shows the existing and projected LOS for each intersection under current traffic patterns.

Figure 2: Study Area Street Network

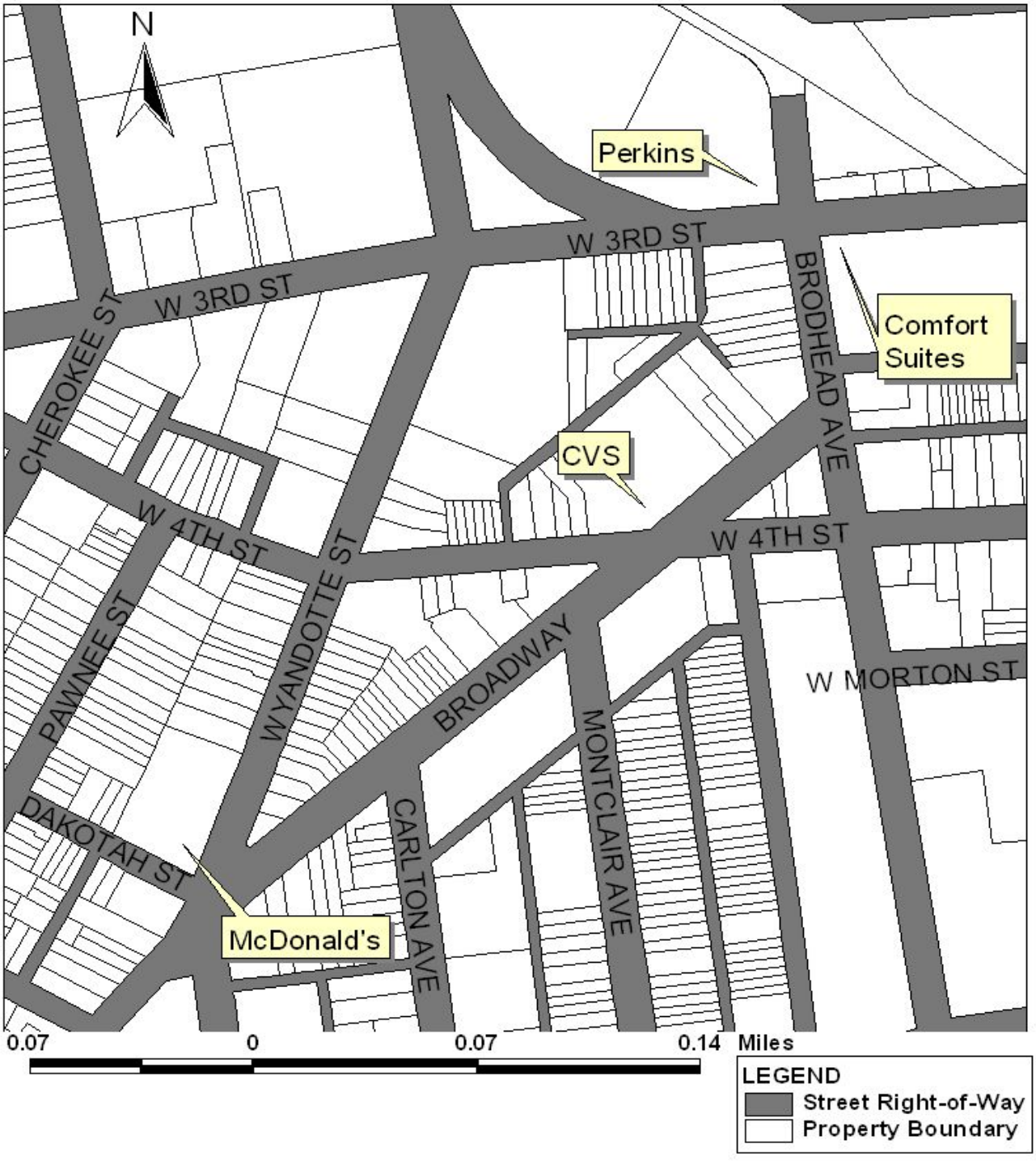


Table 1: Existing Overall LOS

	Existing Overall LOS			
INTERSECTION	**AM PEAK 2004**	**PM PEAK 2004**	**AM PEAK 2014**	**PM PEAK 2014**
3rd St./ Rt. 378	B	B	D	B
3rd St./Wyandotte	D	E	E	F
4th St./Wyandotte	A	B	B	C
5 Points Intersection	C	E	E	F
4th St./Broadway	B	B	B	C
4th St./Brodhead	C	C	C	C
Broadway/Brodhead	N/A	N/A	N/A	N/A
3rd St./ Brodhead	B	B	B	C

Under current conditions, the Third and Wyandotte intersection operates at or below LOS D. Projected future conditions indicate that Third and Wyandotte and the 5 Points intersection will operate below an overall LOS E in the AM Peak and LOS F in the PM peak hour. Other intersections in the network operate anywhere from LOS A to LOS C, showing that some excess capacity exists at the other intersections in the system.

C. Parking Data

A parking inventory of all public and some private parking was taken and occupancy/vacancy rates were collected for all public lots and metered parking in the study area. Figure 3 shows the parking areas examined in the study area. The parking inventory found that approximately 14 spaces in the Flat Iron Garage are typically vacant, about one third of the garage's capacity. More efficient use of the Flat Iron garage could alleviate some of the parking issues on Wyandotte Street between Third Street and the 5 Points Intersection.

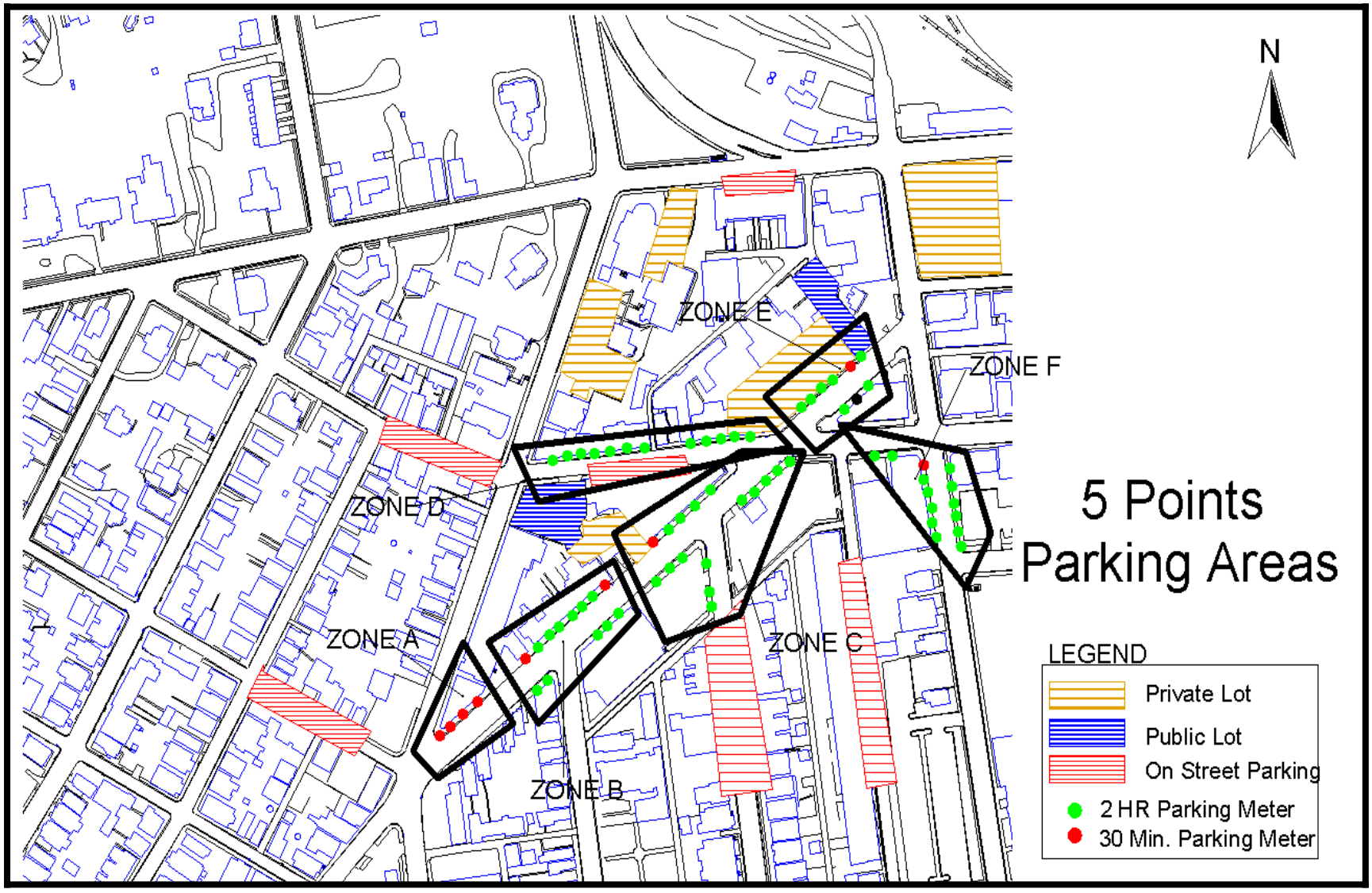
D. Accident Data

City and State accident data was collected and reviewed. The City of Bethlehem prepares accident reports for all accidents reported. A three-year summary of the number of City accident reports within the study area was gathered. The City's electronic accident data only records when and where an accident occurred. To examine the details of the accident one must cross reference the individual accidents to their hand written accident report. Therefore, for the purposes of this study, City accident data was used to provide order of magnitude only.

The State's electronic accident data provides considerably detail, but the State has stringent standards as to what accidents are "reportable". According to Anthony F. Tomczak, PennDOT Safety Engineer, Engineering District 5-0, " a reportable accident is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." Using this list for the safety-related planning purpose of this Study, our analysis found that accident rates along Wyandotte are not abnormal when compared to other similar roads.

In fact Wyandotte is below the statewide average. By contrast, Fourth Street and Broadway Avenue have accident rates that are two and three times higher than the statewide average. The State's accident data will not be kept in the public technical files, as they are confidential respectively under 75 PA C.S. Section 3754 and 23 U.S.C. Section 409.

Figure 3: Parking Map



III. Public Meeting #1 January 12, 2004

A public meeting was held at The Cathedral Church of Nativity on the corner of Third St. and Wyandotte on Monday, January 12, 2004. The purpose of the meeting was to solicit public input on:

- The needs/problems/issues of the 5 Points, and
- Options/solutions that could address the needs/problems/issues of the 5 Points. Approximately 40 to 50 people attended the open house format meeting. All attendees were asked to fill out a questionnaire designed to help planners and engineers understand their issues and concerns. The public identified three specific needs for the area:
  - Need to improve pedestrian safety
  - Need to create more accessible parking for residences and businesses
  - Need to improve traffic flow

IV. Alternatives Analysis

Unfortunately, there is no "cure-all" to addressing the complex interrelated needs of the 5 Points. Trade-offs will have to be made in order to find a successful solution. Numerous alternatives were examined and evaluated based upon how well they met the study's identified needs, the cost to implement them, the length of time to implement the improvement, and its ability to receive support from the public and PennDOT.

A. Alternatives Examined

- Change existing traffic patterns to traffic patterns that existed prior to the development of McDonalds.
  - This alternative is not recommended because it could create an unsafe condition for left-hand turns into the McDonald's. In addition, it will not address the long-term needs of the area as traffic volumes increase.

- Roundabout at the 5 points intersection
  - This alternative was not recommended due to the large amount of Right-of-Way acquisitions required, the high implementation costs, and the length of time to implement.

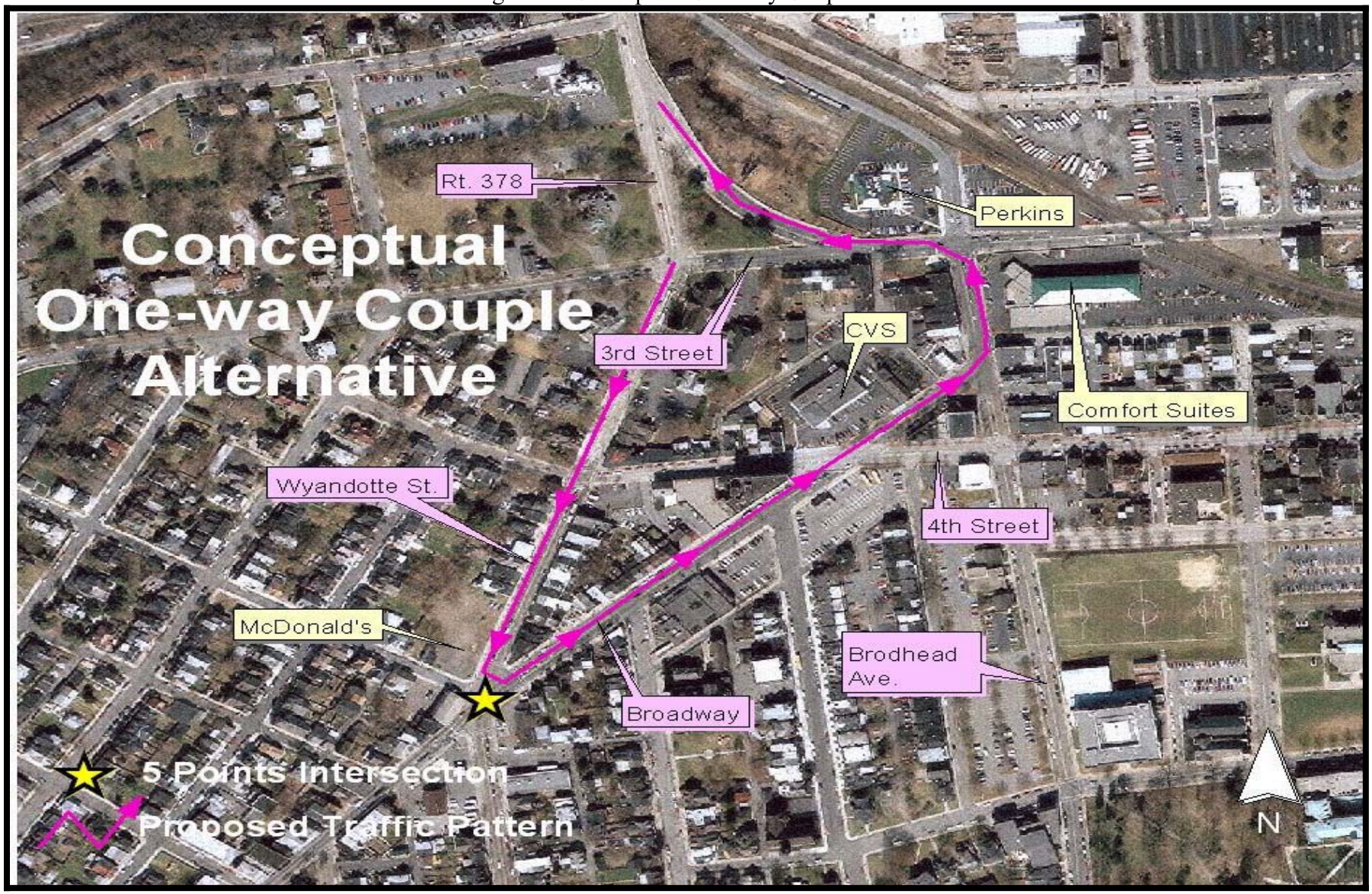
- Pedestrian over/under-pass
  - This alternative was not recommended due to high implementation costs, aesthetic concerns and safety concerns.

- All pedestrian walk phase
  - Not recommended under current traffic patterns due to the impact on LOS. In addition, there is insufficient evidence regarding the merits of this alternative to receive PennDOT support based upon our accident analysis.

- Major Widening
    - This alternative was not recommended because it would not support the character of the neighborhood, high implementation costs, and the length of time to implement.

- One-way Couple
    - The analysis preformed on this alternative was promising. This alternative would change Wyandotte from Third Street to the 5 Points intersection to one-way southbound. Traveling northbound, Broadway Avenue would become one-way northbound connecting into the Third Street Ramp via Brodhead Avenue (see Figure 4). The rationale behind the one-way couple alternative is to eliminate left turning movements at key intersections and distribute traffic to intersections with excess capacity. Initial analysis of this alternative is promising, but additional detailed analysis is needed.

Figure 4: Conceptual One-way Couple



V. Public Meeting Number #2

A second public meeting was held at The Cathedral Church of Nativity on the corner of Third St. and Wyandotte on May 25, 2004 to present the Draft Findings and Recommendations of the study. Approximately 40-50 people attended the meeting. According to the results of a questionnaire distributed at the meeting, the findings were well received. Response to the recommended one-way couple alternative was generally well received, though several questions were raised that cannot be answered without further analysis is completed. The length of time to implement most of the recommendations was a troublesome issue for most residents. A detailed summary is available in the technical file.

VI. The 5 Points Gateway Enhancement Concept

The 5 Points Gateway Enhancement Concept (Concept) is a comprehensive approach to deal with the Pedestrian Safety, Parking, and Traffic Issues associated with the 5 Points Gateway Area. The Concept incorporates the One-way Couple alternative discussed under the section IV and is compatible with existing City programs such as the Blight Elimination and Abatement Response (BEAR) Program and Local Economic Revitalization Tax Assistance (LERTA) Program. The Concept is intended to be the overall approach in dealing with the complex issues associated with the area but it may have to be implemented in stages due to funding issues.

Based upon the positive feedback from Public Meeting #2, a conceptual plan was developed for the Concept in order to perform more detailed analysis. The conceptual plan shows the one-way couple alternative with proposed streetscape improvements such as bulb-outs. A head-to-head comparison (See Appendix "A" for tables and Figures) of the existing traffic pattern and the proposed one-way couple showed that the one-way couple reduces congestion, while providing adequate space to return on street parking to the 400 block of Wyandotte. Some right-of-way acquisition will be needed in the area of the Third and Wyandotte intersection. The Concept is the only alternative analyzed by this study that satisfies all of the identified needs listed in Section III.

The project team met with PennDOT and emergency service operators to review the conceptual plan. No major issues were raised that would render the project infeasible at this time. Additional design and analysis is needed in order to comply with PennDOT design standards. It is important to keep in mind that this is a conceptual plan and that the details may change as the project moves forward in the design process.

Some of the positive impacts associated with the Concept include

- Addresses all the identified community needs.
- Return of metered, on street parking to the 400-block of Wyandotte Street
- Space for streetscape improvements like bulb-outs, decorative lighting, and landscaping.
- Relieves congestion and improves traffic flow.
- Increases overall pedestrian safety.

As mentioned earlier, regardless of the improvement, trade-offs will be required. Some negative impacts associated with implementing the one-way pair alternative include:

- Decreased accessibility to businesses.
- Additional Right-of-Way requirements.
- Additional time & funds to design and implement.

VII. 5 Points Gateway Enhancement Concept: Action Plan

A. SHORT-TERM ACTIONS – (0-6months)

The following short-term actions may improve current conditions in the study area until more permanent long-term solutions can be put in place. These improvements are relatively low in cost and can be implemented quickly. (Figure 5)

- **Traffic**
  1. Optimize traffic signals
  2. Start Preliminary Design on 5 Points Gateway Enhancement Concept
  3. Apply for funding to implement improvements

- **Parking**
  1. Begin negotiations to secure parking at 4th and Wyandotte and Flat Iron Garage
     - This lot is currently leased and the lease expires at the end of 2006. The lot is important to the merchants of the area. If the City can secure access to this garage, we recommend moving permit parking from the lot to the garage and turning the lot into metered parking for patrons of the area's businesses. This would provide short-term relief for the parking lost in the 400 block of Wyandotte St.

- **Pedestrian Safety**
  1. Re-paint cross walks
  2. Work with School District and Police Department to have crossing guards stationed at the 5 Points Gateway Area Intersections

B. MID-TERM ACTIONS (6-24 months)

The following mid-term actions will provide the necessary design work for the 5 Points Gateway Enhancement Concept. These actions would lead to the preparation of cost estimates and implementation schedules (See Figure 6).

- **General**
  1. Continue design of 5 Points Gateway Enhancement Concept

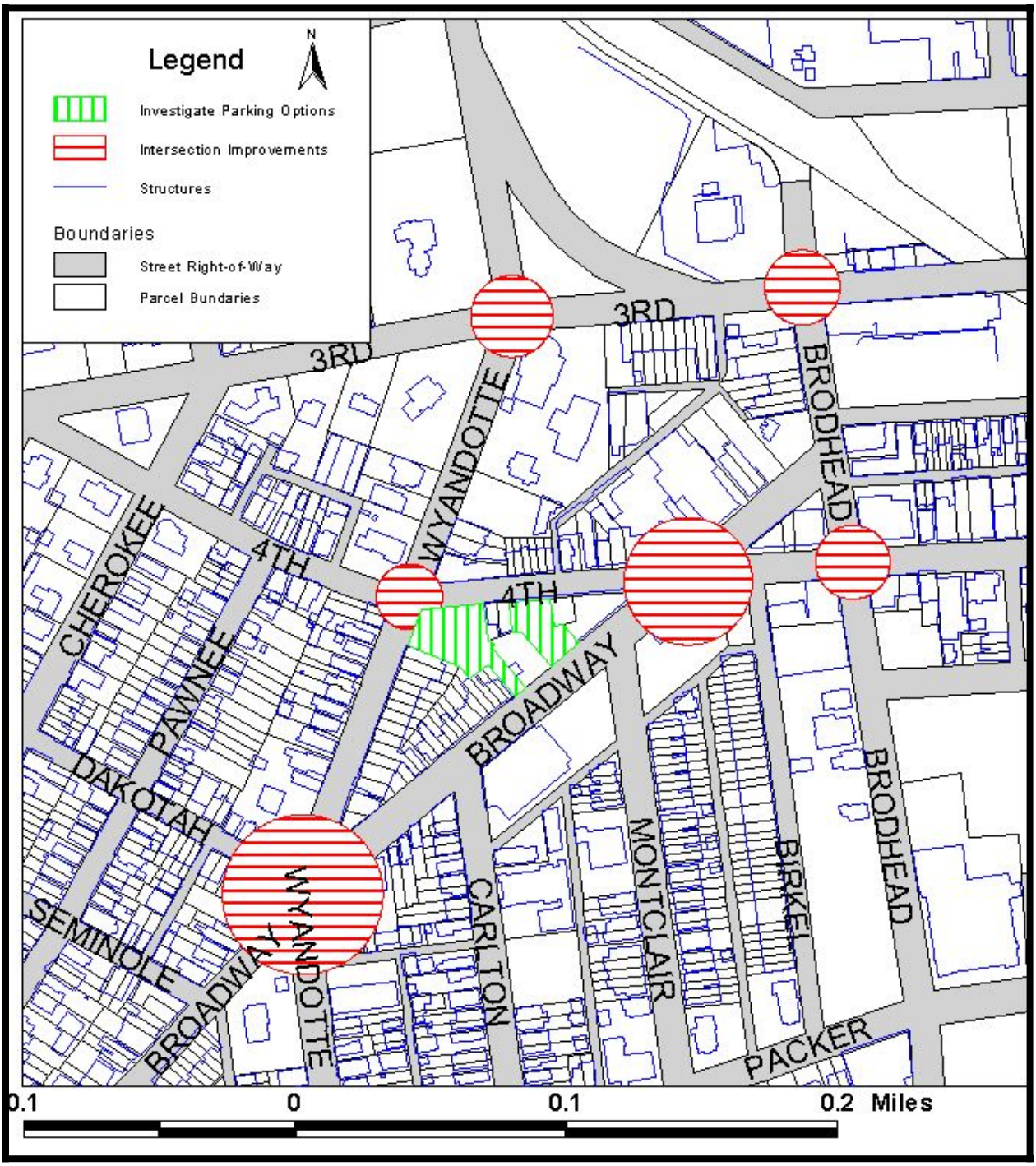
- **Traffic**
  1. Perform required PennDOT Studies/Design to implement one-way couple traffic alternative
  2. Investigate signage improvements

- **Parking**
  1. Continue investigating acquisition of properties for additional parking and gateway improvements

- **Pedestrian Safety**
  1. Design streetscape improvements
     - Traffic calming measures
       - Textured crosswalks
       - Bulb-outs
     - Decorative lighting
     - Landscaping

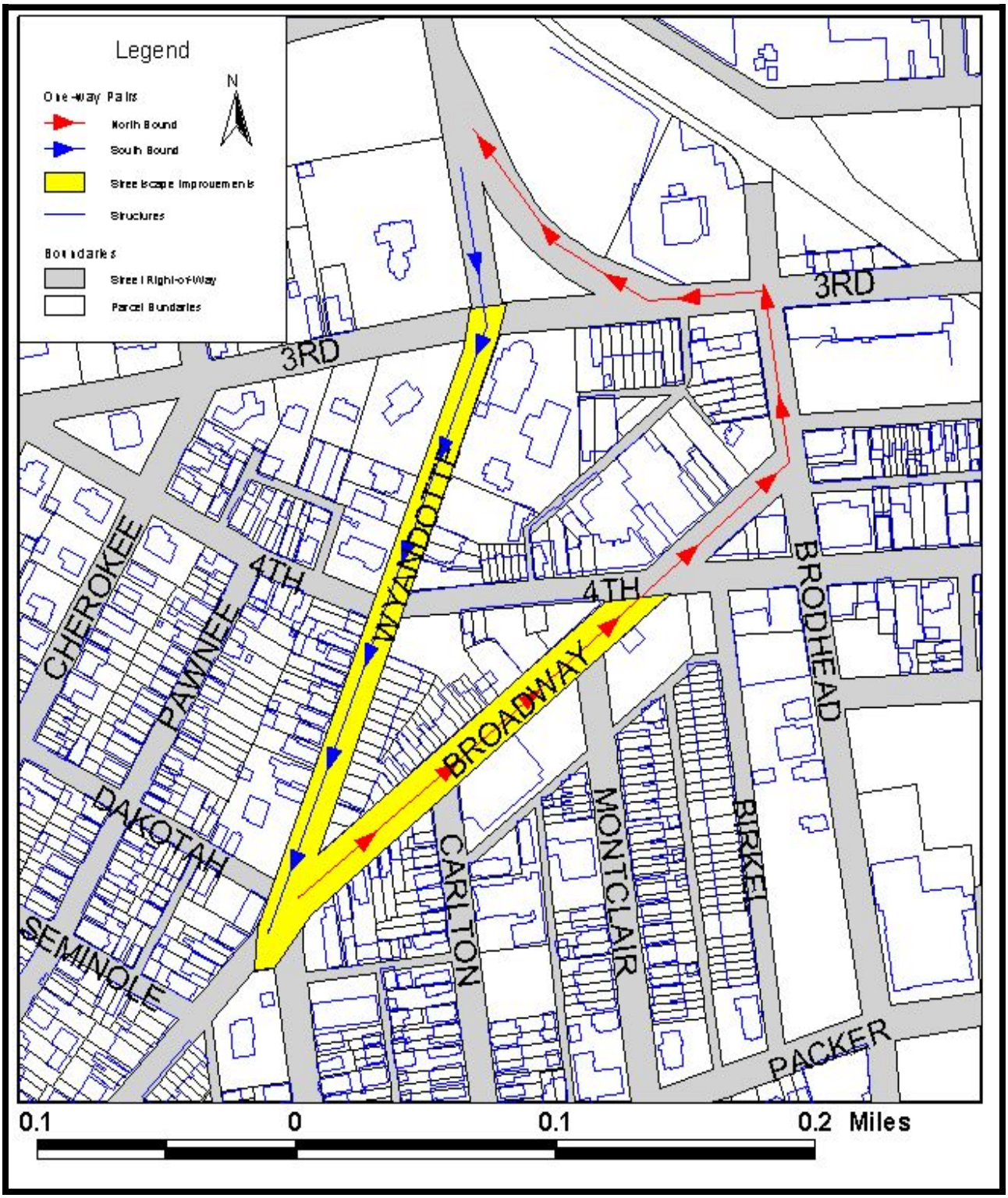
Short-Term Actions

Figure 5: Short Term Actions



Mid and Long Term Recommendations

Figure 6: Mid and Long-Term Recommendations



C. LONG-TERM ACTIONS (24+ months) (Figure 6)

- **General**
  1. Implement 5 Points Gateway Enhancement Concept

- **Traffic**
  1. Implement one-way couple traffic alternative
  2. Implement signage improvements

- **Parking**
  1. Continue investigating acquisition of properties for additional parking and gateway improvements

- **Pedestrian Safety**
  1. Implement streetscape improvements
     - Traffic calming measures
       - Textured crosswalks
       - Bulb-outs
     - Streetscape Enhancements
       - Decorative lighting
       - Landscaping

VIII. Conclusion

On Thursday, November 4, 2004, the findings and recommendations contained in this report were presented to City Council. Council Members and the public raised several important and valid questions about the various alternatives, which are summarized in Appendix "B". While there are a number of outstanding issues that must be addressed thought further public involvement, detailed design, and analysis, the results of this study indicate that the 5 Points Gateway Enhancement Concept presents the best opportunity to meet the stated goals for the project in a cost- and time- feasible-manner.